

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
National Aerospace University  
«Kharkiv Aviation Institute»  
Department of Philosophy and Social Sciences (№ 701)

**APPROVED**

Guarantor of Educational Program

  
Daniil Revenko

August 29, 2025

**SYLLABUS OF THE COMPULSORY ACADEMIC DISCIPLINE**

**Philosophy**

**Field of Knowledge:** 05 Social and Behavioral Studies

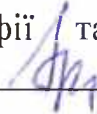
**Specialty:** 051 Economics and International Economic Relations

**Educational Program:** Economics

**Form of study:** full-time / Part-time

**Level of higher education:** third (educational-Scientific / PhD)

**Syllabus effective from:** September 1, 2025

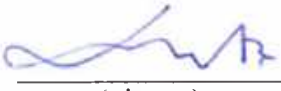
**Розробник:** Професор кафедри філософії та суспільних наук, доктор філософських наук, професор  Андрій АРТЕМЕНКО

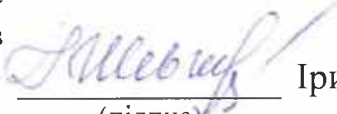
**(Developer:** Professor of the Department of Philosophy and Social Sciences, Doctor of Philosophical Sciences, Professor Andrii ARTEMENKO)

Силабус навчальної дисципліни розглянуто на засіданні кафедри філософії та суспільних наук гуманітарно-правового факультету:  
Протокол № 1 від 27.08.2025 року

Завідувач кафедри філософії та суспільних наук,  
доктор філософських наук, професор  Ольга ПРОЦЕНКО  
(підпис)

Погоджено:

Завідувач відділу аспірантури і докторантури  Володимир СЕЛЕВКО  
(підпис)

Голова наукового товариства студентів, аспірантів, докторантів і молодих вчених  Ірина ШЕВЧЕНКО  
(підпис)

### General Information about the developer



Full Name: Andrii Pavlovykh Artemenko  
 Position: Professor of the Department of Philosophy and Social Sciences  
 Academic Degree: Doctor of Philosophical Sciences (Dr. Hab.)  
 Academic Title: Professor  
 E-mail: a.artemenko@khai.edu  
 Courses Taught: "Philosophy", "History of Philosophy", "Logic and Critical Thinking", "Social Philosophy".  
 Research Interests: Philosophical anthropology; social philosophy; urban studies and contemporary urban aesthetics.

#### 1. Description of the Academic Discipline

**Semester:** 3

**Status:** Compulsory

**Total Hours:** 150 hours / 5 ECTS credits

*Full-time:* 64 contact hours / 86 hours of independent work.

*Part-time:* 16 contact hours / 134 hours of independent work.

**Types of Classes:** Lectures, practical sessions (seminars), independent work.

**Type of Control:** Individual assignments, continuous assessment, exam.

**Language of Instruction:** English

**Prerequisites:** "Scientific Project Management", "Processing and analysis of scientific research results using IT".

**Co-requisites:** "Methodology of Pedagogical Activity".

## 2. Goal and Objectives

**Goal:** Based on an interdisciplinary approach to understanding the problems of modern philosophy and the specifics of social development, to form a clear idea of models for solving social problems and the development of science and technology.

**Objectives:**

- to establish the features of the relationship between "ontology of digital space", "network system" and "social construction";
- to provide a systematic understanding of digital space as a socio-technical reality;
- to introduce the main concepts of modern philosophy explaining the transformation of culture and social structures in the digital age;
- to form critical thinking skills regarding the impact of technology on society and humans.

Competencies acquired:

After completing this program, the student should have the general competencies (GC):

GC1. Ability to generate new ideas (creativity).

GC2. Ability to identify, pose and solve problems.

GC3. Ability to work in an international context.

GC5. Ability to solve complex problems of philosophy based on a systematic scientific worldview and a general cultural outlook while adhering to the principles of professional ethics and academic integrity.

After completing this program, the student should have the special competencies (SC):

SC1. Ability to conduct original research, achieve scientific results that create new knowledge in philosophy and related interdisciplinary areas and can be published in leading scientific publications in philosophy and related fields.

SC3. The ability to apply methods of philosophical and interdisciplinary research, identify their heuristic possibilities and limits, use relevant research tools.

SK4. The ability to carry out scientific and pedagogical activities in higher education.

SK5. The ability to analyze, systematize and summarize the results of interdisciplinary scientific research in the field of philosophy, assess the current state and trends in the development of philosophy.

SK6. The ability to identify, pose and solve research problems in the field of philosophy, evaluate and ensure the quality of research.

Upon completion of this program, the applicant will achieve the following learning outcomes (LO):

LO1. Have advanced conceptual and methodological knowledge in philosophy and at the border of subject areas, as well as research skills sufficient to conduct scientific and applied research at the level of world achievements in philosophy, obtain new knowledge and implement innovations.

LO3. Effectively apply in professional activities knowledge of the basic principles of theoretical and practical philosophy, the history of world and domestic philosophical thought, as well as the main directions and leading trends in modern world philosophy.

LO4. Formulate and test hypotheses; use appropriate evidence to substantiate conclusions, in particular, the results of theoretical analysis, applied research, available literary data; analyze the problem under study taking into account a wide intellectual and socio-cultural context.

LO5. Plan and carry out theoretical research in philosophy and related interdisciplinary areas using modern tools, critically analyze the results of their own research and the results of other researchers in the context of the entire complex of modern knowledge on the problem under study.

LO6. Deeply understand the general principles and methods of philosophical sciences, as well as the methodology of scientific research, apply them in their own research in the field of philosophy and in teaching practice.

LO9. To organize and implement the educational process in the field of philosophy, its scientific, educational, methodological and regulatory support, and to apply effective methods of teaching academic disciplines.

### 3. Course Content.

#### **Topic 1.** *Prerequisites for the formation of the ontology of digital space*

Audience workload (full-time/part-time):

**Lecture topics:** Prerequisites for the ontology of digital space. Martin Heidegger's new ontology. The concept of "care" and the idea of an active living environment. The other side of M. Heidegger's ontology or what are "action structures". Poststructuralism and Actor-Network Theory: "agentive environment". New object-centric and speculative ontology. Meillassou and Heidegger: a break with hermeneutic ontology. Meillassou and Actor-Network Theory: Radical Pluralism of Being. Object-Oriented Ontology of G. Harman. Ontological Pluralism and "Democracy of Objects". Joint Criticism of Correlationism: Break with Phenomenology and Hermeneutics.

**Practical (seminar) lesson:** consolidate knowledge of the history of philosophical ideas about space, discuss classical and modern interpretations.

**Questions for discussion:** Is space possible without material boundaries? How to combine the physical and digital dimensions of space?

**Task:** prepare a comparative table of concepts of space in Descartes, Kant and Lefebvre.

**Topic of practical (seminar) lesson:** The uniqueness of philosophical cognition.

**Independent work:** study of educational and methodological materials. Formulation of questions to the teacher (online consultation). Preparation of a presentation, report on the topic of the practical (seminar) lesson.

**Independent work on the topics:** Key concepts of the philosophy of space in the history of thought.

**Practical (seminar) lesson:** Studying the lecture material. Formulating questions for the teacher. Preparation of a presentation, report: How has the concept of space changed in modern philosophy? What technological inventions have had the greatest impact on its modern understanding?

**Task:** prepare an essay (2–3 pages) on the impact of telecommunications on spatial representations.

**Topic of the practical (seminar) lesson:** Poststructuralism and Actor-Network Theory: "agentive environment".

**Independent work:** Studying educational and methodological materials. Formulating questions for the teacher (online consultation). Preparation of a presentation, report on the topic of the practical (seminar) lesson.

**Independent work on topics:** Model of Western social consciousness.

#### **Topic 2.** *From the philosophy of structure to the activity of things and networks*

Audience workload (full-time/part-time):

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** From the philosophy of structure to the activity of things and networks. Origins: structure, discourse, care. From structure to the space of networks. Philosophy of materiality. Peter-Paul Verbeek: technology as a moral agent. Don Ihde: post-phenomenology of technology. Jane Bennett: "vibrant matter".

**Practical (seminar) lesson:** Studying the lecture material. Formulating questions to the teacher. Preparation of a presentation, report: Can a technical object be considered a social actor?

What risks and opportunities does the Internet of Things create? Task: to develop a map of actors for a specific technical device (for example, a “smart” lantern).

**Topic of a practical (seminar) lesson:** transition from a static view of the world to understanding the network activity of objects

**Independent work:** processing of educational and methodological materials. Formation of questions for the teacher (online consultation). Preparation of a presentation, report on the topic of a practical (seminar) lesson.

**Independent work on the topics:** Jane Bennett: “vital materiality”.

### **Topic 3.** *Ontology of digital space.*

Class load (full-time/part-time):

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** Ontology of digital space as new principles of organizing the human world. Specificity of the ontology of digital space. Medialization and algorithmic dependence of digital space. Ontology of coexistence and networking. Interfacedness as a condition of being. Structure of digital space. Network structure. Platform architectonics.

**Practical (seminar) lesson:** Studying lecture material. Formulating questions for the teacher. Preparing a presentation, report: Space of flows according to M. Castells.

**Topic of practical (seminar) lesson:** How is the perception of time and space changing in the digital age? Can we talk about the “end of geography”?

**Independent work:** processing of educational and methodological materials. Formulation of questions for the teacher (online consultation). Preparation of a presentation, report on the topic of practical (seminar) lesson.

**Independent work on topics:** The boundaries of the real and the virtual.

### **Topic 4.** *Digital sociality.*

Classroom load (full-time/part-time):

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** Social ontology of the information society. Concepts of information and network societies (D. Bell, E. Toffler, M. Castells). Digital sociality. The significance of temporary communities in the system of social processes and management. Platform sociality. Digital double and its role in the digitized social space. Socio-anthropological problem of the digital double as a feature of social identity in a digital society. Digital social management. Algorithmic transparency as a tool for legitimizing digital governance. The problem of transparency in the digital society and its role in modern technologies of social construction and governance.

**Practical (seminar) lesson:** Studying lecture material. Formulating questions for the teacher. Preparing a presentation, report: The impact of algorithms on collective actions.

**Topic of practical (seminar) lesson:** Global mobility of labor, goods, services and capital.

**Independent work:** Studying educational and methodological materials. Formulating questions for the teacher (online consultation). Preparing a presentation, report on the topic of the practical (seminar) lesson.

**Independent work on topics:** The impact of algorithms on social media news feeds.

### **Topic 5.** *Information economy.*

Class load (full-time/part-time):

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** The concept of “Information Economy”. Gig economy in the context of digital and network society. Digital sociality and precariat: changes in the labor market and social landscape of digital society. Surveillance capitalism as a manifestation of network society.

**Practical (seminar) lesson:** Studying lecture material. Formulating questions for the teacher. Preparing a presentation, report: The concept of “Information Economy” in the works of Manuel Castells

**Topic of practical (seminar) lesson:** Precariat – a new social class.

**Independent work:** processing of educational and methodological materials. Formulation of questions for the teacher (online consultation). Preparation of a presentation, report on the topic of a practical (seminar) lesson.

**Independent work on topics:** Changes in the labor market under the influence of globalization processes

### **Topic 6. *Digital culture.***

Volume of classroom load (full-time / part-time):

**Lecture:** face-to-face-video-online lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** Digital culture as a frame of modernity. The concept of "digital culture". Hybridity of corporeality in digital culture. Visual turn of culture and digital space. The visual turn of culture and the digital space. The aesthetic concept of metamodernity and its connection with digital culture.

**Practical (seminar) lesson:** Studying the lecture material. Formulating questions for the teacher. Preparing a presentation, report: Digital culture and the creative economy.

**Topic of the practical (seminar) lesson:** The visual turn of culture and the digital space.

**Independent work:** Studying educational and methodological materials. Formulating questions for the teacher (online consultation). Preparing a presentation, report on the topic of the practical (seminar) lesson.

**Independent work on the topics:** Analyze the influence of Instagram on modern visual trends.

### **Topic 7. *Ethics of digital communication***

Audience workload (full-time/part-time):

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** Definition of the concept of "ethics of digital communication". Ethical knowledge and its structure in the conditions of digitalization. Information and digital ethics. Analysis of the basic principles of universal macroethics for the network society. Freedom, coercion and moral culture in the digital environment. The problem of privacy in the network space. Dialogue and communication in the network society. Ethics of digital transparency. Dialogue and communication in the network society. Artificial intelligence and the problem of technoethics.

**Practical (seminar) lesson:** Studying lecture material. Formulating questions for the teacher. Preparing a presentation, report: Methodological concept of social topology.

**Topic of practical (seminar) lesson:** Dialogue and communication in a network society.

**Independent work:** Studying educational and methodological materials. Formulating questions for the teacher (online consultation). Preparing a presentation, report on the topic of practical (seminar) lesson.

**Independent work on topics:** Artificial intelligence and the problem of technoethics.

### **Topic 8. *Philosophy of digital space for engineering and design training.***

Class load (full-time/part-time) :

**Lecture:** face-to-face-video-online-lecture: verbal (explanation, story, conversation, educational discussion, etc.), visual (presentation of the lecture topic, illustration, demonstration, independent observation).

**Lecture topics:** Cybernetic-humanitarian theory of modern humanity. Posthuman is a way of talking about a person, bypassing the very idea of individual freedom. Body and topos: reproduction of a spatial object. The problem of appropriation of space: phantom and phantom representations. The idea of the secondary nature of the material body. The body as a product and place of discourse. The ability for the body to be constructed. Posthuman is not a new person, it is a new kind of person, and therefore a new way for people to talk about their bodies, existing and modified.

**Practical (seminar) lesson:** Studying lecture material. Formulating questions for the teacher. Preparing a presentation, report: Forming the concept of "post-humanity" according to Catherine Hales' book "How We Became Post-Humanity"

**Topic of the practical (seminar) lesson:** Human and post-human, according to the concept of Catherine Hales.

**Independent work:** Studying educational and methodological materials. Formulating questions for the teacher (online consultation). Preparing a presentation, report on the topic of the practical (seminar) lesson.

**Independent work on topics:** The problem of corporeality in the philosophy of the late 20th century.

**Final control** involves completing a task (at the applicant's choice: an article, a report at a scientific conference, a scientific and practical seminar, theses) on the topic of the applicant's scientific work and/or the scientific work of the department.

#### 4. Individual tasks

Individual tasks in the discipline are selected by applicants independently (article, report at a scientific conference, scientific and practical seminar, theses) according to the course program and the topic of the dissertation research.

#### 5. Teaching methods

Verbal, visual, practical; explanatory and illustrative, reproductive, partially search; testing and evaluation of knowledge, skills and abilities, oral presentation of knowledge, consolidation of educational material, independent work on understanding and mastering new material.

#### 6. Control methods

Current control: survey on the materials of the tasks and discussion at practical (seminar) classes; group and individual consultations.

**Final control:** final tasks, exam

### 7. Criteria for assessing the learning outcomes of applicants and the distribution of points they receive

#### 7.1. Distribution of points received by applicants (quantitative assessment criteria)

Component	Points per session	Number	Total
Work in practical sessions	0 – 5	16	0 – 80
Individual work (abstract/report)	0 – 10	1	0 – 10
Final control	0 – 10	1	0 – 10
<b>Total for Semester</b>			<b>100</b>

## 7.2. Grading Scale

The final module grade for the academic discipline is formed before the start of semester control based on the sum of points for the performance of the components of the educational work (the number of points received by the higher education applicant during practical classes, individual work) and the results of the final control. With the consent of the applicant who scored from 60 to 100 points, the final module grade can be counted as a control measure - semester grade.

Applicants who received less than 60 points are certified with an "unsatisfactory" grade and are considered to have academic debt. They are required to undergo the procedure of the final (semester) control control measure in order to eliminate academic debt during the examination sessions and holidays.

When taking the final (semester) control measure, the applicant has the opportunity to receive a maximum of 100 points.

## 7.2. Criteria for assessing the applicant's work during the semester

The applicant's level of competence based on the results of the study is determined by the following criteria:

**Excellent (90–100).** The theoretical content of the discipline (course) is fully mastered by the applicant, the necessary practical skills for working with educational material are fully formed, all educational tasks provided for by the syllabus are completed in full, the work is without errors or with one minor error.

**Good (75–89).** The theoretical content of the course is fully mastered, practical skills for working with educational material are mainly formed, all educational tasks provided for by the syllabus are completed, the quality of performance of none of them is assessed with the minimum number of points, some types of tasks are completed with errors, the work has several minor errors or one or two significant errors.

**Satisfactory (60–74).** The theoretical content of the discipline is partially mastered, some practical skills of working with educational material are not formed, some of the tasks provided for by the syllabus are not completed or the quality of some of them is assessed with a number of points close to the minimum, the answer (oral or written) is fragmentary, inconsistent.

**Unsatisfactory (0-59).** The applicant has fragmentary knowledge based on previous experience, but is unable to formulate definitions of concepts, classification criteria and interpret their content, cannot use knowledge when solving practical tasks.

In accordance with p. 3.2. Regulations on the rating assessment of student achievements at National Aerospace University "Kharkiv Aviation Institute", the applicant may be assigned points for other activities related to the academic discipline, which are accrued and can be taken into account in the overall assessment for the semester. Points, in particular, may be awarded for such activities related to the academic discipline as:

- participation in a scientific communicative event (conference, seminar, round table, etc.) with writing abstracts of a scientific report on the subject of the academic discipline (20 points);
- participation (listening) in at least 5 webinars related to the academic discipline (3-15 points);
- participation in a training related to the academic discipline (15 points);
- completion of an online course related to the academic discipline (20 points);
- participation and obtaining a ranking place in a student competition thematically related to the subject of the academic discipline (30 points);
- development and creation of didactic material on the subject of the academic discipline (15 points) (confirmation – availability of didactic material);
- other activities related to the academic discipline, with prior approval from the scientific and pedagogical employee who teaches the academic discipline.

**Accepted grading scale**

Total points	Traditional scale grade	
	Exam, differentiated assessment	Assessment
90 – 100	Excellent	Passed
75 – 89	Good	
60 – 74	Satisfactory	
0 – 59	Unsatisfactory	Not passed

**8. Course Policy**

**Class attendance. Absence regulation.** The interactive nature of the course requires mandatory attendance at practical classes. Applicants who, under certain circumstances, cannot regularly attend practical classes must agree with the teacher during the week on a schedule for individual work-through of missed classes. Individual missed classes must be worked out at the nearest consultation within a week after the absence. Work-through of classes is carried out orally in the form of an interview on the questions specified in the class plan. In some cases, written work-through of missed classes is allowed by completing an individual written assignment. Applicants who, as of the beginning of the examination session, have more than 70% of missed classes unworked are not allowed to work-through.

**Compliance with the requirements of academic integrity.** While studying the academic discipline, applicants must adhere to generally accepted moral and ethical norms and rules of conduct, requirements of academic integrity, stipulated by the Regulations on Academic Integrity of the National Aerospace University "Kharkiv Aviation Institute" (<https://khai.edu/assets/files/polozhennya/polozhennya-pro-akademichnu-dobrochesnist.pdf>). It is expected that applicants' works will be their original research or reasoning. The absence of references to the sources used, fabrication of sources, plagiarism, interference in the work of other applicants are, but are not limited to, examples of possible academic dishonesty. Identification of signs of academic dishonesty in the applicant's written work is grounds for its non-enrollment by the teacher, regardless of the extent of plagiarism or deception. When performing individual independent work, essays containing at least 60% of the original text when checked for plagiarism are allowed for defense, essays - 70%.

**Conflict resolution.** The order and procedures for resolving conflicts related to corrupt actions, conflicts of interest, various forms of discrimination, sexual harassment, interpersonal relationships and other situations that may arise during training, as well as the rules of ethical behavior are regulated by the Code of Ethical Behavior at the National Aerospace University "Kharkiv Aviation Institute" (<https://khai.edu/ua/university/normativna-baza/ustanovchi-dokumenty/kodeks-etichnoi-povedinki/>).

**Methodological Support:** <http://library.khai.edu/>

**Course Page (CMS Mentor):** <https://mentor.khai.edu/course/view.php?id=3614>

## Recommended Reading

### Basic

1. Artemenko Ya. I., Ivanova K.A., Sadovnikov O.K., Krivchikova G.F., Kulakova O.M., Balabay Ya.V. *Philosophy (Credit-Module Course): Handbook for Foreign University and Post Graduate Students.* – Revised edition. - Kharkiv: NPhU Publishing House, 2020. – 371p.

### Philosophy

1. Annas J. *Ancient Philosophy: A Very Short Introduction.* Oxford University Press, 2000. – 145 p.
2. Audi R. *Epistemology: A Contemporary Introduction to the Theory of Knowledge.* 3d edition. Routledge, 2010. 427 p.
3. Bubner R. *German idealist philosophy.* Penguin Classics, 1997. 388 p.
4. Copleston F. *A History of Philosophy: Late Medieval and Renaissance Philosophy: Ockham, Francis Bacon, and the Beginning of the Modern World.* Image, 1993. 246 p.
5. Copleston F. *A History of Philosophy: Modern Philosophy from the French Revolution to Sartre, Camus, and Levi-Strauss.* Image, 1994.
6. Effingham N. *An Introduction to Ontology.* Polity, 2010. 224 p.
7. El-Rouayheb Kh., Schmidtke S. *The Oxford Handbook of Islamic Philosophy.* Oxford University Press, 2016. 720 p.
8. Fischer-Schreiber I., Ehrhard F.-K., Friedrichs K. *The Encyclopedia of Eastern Philosophy and Religion: Buddhism, Hinduism, Taoism, Zen — A Complete Survey of the Teachers, Traditions, and Literature of Asian Wisdom.* Shambhala, 2015. 486 p.
9. Habermas J., McCarthy, T. Lawrence F. *The Philosophical Discourse of Modernity.* Polity Press, 2002. 456 p.
10. Kenny A. *Ancient Philosophy: A New History of Western Philosophy. Volume 1.* Oxford University Press, 2006. 364 p.
11. *Readings in Ancient Greek Philosophy: from Thales to Aristotle.* 4rd edition. Hackett Publishing Co. Reeve, 2011. 1010 p.
12. Kenny A. *Medieval Philosophy: A New History of Western Philosophy.* Oxford University Press, 2005. 455 p.
13. Kenny A. *Philosophy in the Modern World: A New History of Western Philosophy.* Oxford University Press, 2007. 320 p.
14. Kleinman P. *Philosophy 101: From Plato and Socrates to Ethics and Metaphysics, an Essential Primer on the History of Thought.* Adams Media, 2013. 288 p.
15. Latour B. *An Inquiry into Modes of Existence. An Anthropology of the Moderns.* Harvard University Press, 2003. 519 p.
16. Russell B. *History of western philosophy. New Ed.* Routledge, 2004. 688 p.

### Auxiliary

1. Bauman, Z. *Globalization: The Human Consequences* - Cambridge: Polity Press 1998
2. Beck U. *What Is Globalization?.* Cambridge: Polity Press. 1999
3. Beck U. *The Brave New World of Work.* Cambridge: Cambridge University Press. 2000
4. boyd, d. *It's Complicated: The Social Lives of Networked Teens.* Yale University Press, 2014.
5. Braidotti, R. *The Posthuman.* Polity Press. 2013
6. Capurro R. *Digital Ethics in Global Forum on Civilization and Peace Academy of Korean Studies, Seoul, 2009.* pp. 207-216.
7. Couldry, N., Mejiias U. A. *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism.* Stanford University Press, 2019.
8. Foucault, M. *Discipline and Punish: The Birth of the Prison.* Vintage Books. 1977
9. Fromm E. *Escape from Freedom* Henry Holt and Company, 1994, 301p.
10. Goffman, E. *The Presentation of Self in Everyday Life.* Anchor Books, 1959.
11. Heidegger, M. *Poetry, Language, Thought.* Harper & Row. 1971
12. Hansen, M. B. N. *Bodies in Code: Interfaces with Digital Media.* Routledge. 2006